MEDICARE MENTAL HEALTH DEMONSTRATION

FINAL EVALUATION REPORT
EXECUTIVE SUMMARY

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Submitted to:

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SYNOPSIS OF THE MEDICARE MENTAL HEALTH DEMONSTRATION

Basic Features Of Demonstration

1. The Medicare Mental Health Demonstration was mounted principally in response to the President's Commission on Mental Health. The Demonstration was in effect from April 15, 1981, to April 14, 1983. Forty facilities participated--14 community mental health centers (CMHCs), 12 ambulatory mental health clinics (AMHCs), and 14 partial hospitalization programs (PHPs).

2. The Demonstration expanded existing Medicare Part B mental health benefitis by:

    - Covering partial hospitalization services (now specifically excluded under Medicare) on an unlimited basis

    - Increasing reimbursement to $750 based on charges in one-half of the CMHCs and AMHCs, and unlimited for beneficiaries served by the other half. The current annual limit is $250 reimbursement for physician services and no limit on services incident to those of a physician as long as the physician limit has not been attained

    - Covering services provided by or supervised by qualified psychologists, social workers, and nurses in addition to the current Medicare coverage of physician provided or supervised services.

    Other salient aspects of the demonstration benefits were that the annual Medicare deductible was waived and facilities were reimbursed on the basis of costs as opposed to the current basis, charges.

Objectives Of The Evaluation Of The Demonstration

1. To determine the effects of the demonstration on the administration and operations of the demonstration sites.

2. To determine the effects of the demonstration on beneficiary and service utilization.

3. To determine the costs to Medicare for the demonstration benefit package, including possible financial offsets to Medicare that may occur.

Summary Of Major Findings

Impact On Facilities

1. The 40 facilities were able to meet the conditions of participation established for the demonstration by the Department of Health and Human Services--physician supervision, supervision by Qualified Mental Health Professionals (QMHPs), provision of covered services, maintenance of requisite clinical records, and operation of a utilization review program.

2. In order to meet the conditions of participation and to file requisite bills and cost reports, participating facilities needed to make few changes. The most frequent changes noted were:

    - An increase in psychiatrists' time to comply with physician supervision requirements
    - The addition of QMHPs or assignment of new responsibilities to them, to meet the QMHP supervision requirements
    - The expansion of clinical recordkeeping activities
    - The establishment of a utilization review program
    - The addition of administrative staff to perform billing and cost reporting activities

3. According to the measures used during the evaluation, quality of care relative to client outcome was unaffected by the demonstration. However, the structure and process dimensions of quality of care--staffing, physician supervision, utilization review/quality assurance, and clinical recordkeeping--were affected positively by the demonstration.

Utilization

1. In the two-year period prior to the demonstration (Baseline Period), 1,139 beneficiaries were served by demonstration facilities only during that period; 6,638 beneficiaries were served only in the Demonstration Period; and 2,964 beneficiaries were served in both periods. Accordingly, during the Baseline Period, 186 per 100,000 Medicare enrollees1/ living in areas served by demonstration facilities were actually served by the demonstration facilities. In the Demonstration Period, 377 per 100,000 Medicare enrollees were actually served by the demonstration facilities. This was a utilization rate of 0.2 percent and 0.4 percent by enrollees, in the Baseline and Demonstration Periods, respectively.

1/ An enrollee means someone who pays the Medicare Part B monthly premium, whether or not he or she uses Medicare benefits.

For the Medicare program as a whole, it was estimated that 1.2 percent of the Medicare beneficiary2/ population submitted bills to Medicare for ambulatory psychiatric care during 1981.3/ For the United States population as a whole, slightly less than 2 percent used the services of specialty mental health providers on an ambulatory basis in 1977, with elderly persons having the lowest utilization rate.4/ This is also in keeping with recent epidemiologic data showing the lowest prevalence of mental disorders as being among the elderly.5/

2. The increased use of demonstration facilities by Medicare beneficiaries during the Demonstration Period was due largely to an influx of elderly beneficiaries, characterized as female, white, and never having been previously treated for a mental disorder--also the characteristics of the typical person enrolled in Medicare.

3. The types of services provided and the providers of services changed from the Baseline to the Demonstration Periods. During the Demonstration Period, there was an increase in the proportion of beneficiaries receiving individual therapy, group therapy, partial hospitalization, and other services. There was a corresponding decrease in the proportion of beneficiaries receiving medication therapy, psychiatric/psychological examinations, and other therapeutic services. There were significant increases in the proportion of beneficiaries receiving services from QMHP psychologists, psychiatric social workers, nonpsychiatric physicians, and counselors. These findings were also true when the distribution of service encounters was examined.

Costs

1. During the Demonstration, facilities were reimbursed on a cost6/ basis, but did submit charge6/ information. Overall $10,840,697 was paid out under the demonstration--$6,008,668 (55 percent) to CMHCs, $2,274,074 (21 percent) to AMHCs, and $2,557,952 (24 percent) to PHPs.

2/ A beneficiary means a Medicare enrollee who uses any type of Medicare benefits.

3/ John Birmaier, Health Care Financing Administration, July 16, 1982.

4/ Constance M. Horgan. "Use and Expenditure Patterns for Ambulatory Mental Health Services," Data Preview Services, National Center for Health Services Research, 1984.

5/ Jerome K. Myers, et al. "Six-Month Prevalence of Psychiatric Disorders in Three Communities," Archives of General Psychiatry, 41(10), 1984, 959-967.

6/ Currently under Medicare Part B, services are reimbursed on a usual, customary and reasonable charge basis according to bills submitted. Under, the demonstration, participating facilities were reimbursed on a reasonable cost basis like facilities under Medicare Part A, according to cost reports submitted. However, application of the 80 percent coinsurance and the annual limit on reimbursement (for those CMHCs and AMHCs with limits) was made on the basis of charges, according to the bills submitted during the demonstration.

2. On a charge basis there were $286,357 in charges to Medicare during the Baseline Period principally for physician services, and $8,909,078 during the Demonstration Period, of which 56 percent was for partial hospitalization. Charges per encounter increased by 4 percent ($28 to $29) from the Baseline to the Demonstration, whereas charges per hour of partial hospitalization decreased by 25 percent ($8 to $6). The $750 limit facilities had substantially higher per beneficiary charges than the no limit facilities in the Baseline Period ($548 to $182) but not in the Demonstration Period ($534 to $585).

3. Overall, the total cost per beneficiary (user of demonstration benefits) for the entire demonstration was $1,020 ($1,012 for CMHCs, $598 for AMHCs, and $2,871 for PHPs). The cost per encounter varied by type of facility--$44 for CMHCs, $52 for AMHCs, and $18 for PHPs, as did the cost per hour of partial hospitalization--$12 for CMHCs and $6 for PHPs. These costs are substantially less than those reported in a 1979 NIMH study.7/.

4. Overall, 56 percent of the beneficiaries in the $750 limit facilities met the limit for one full calendar year of the demonstration. Overall, some 55 percent of all beneficiaries (without regard to the limit) had annual demonstration charges less than $250. In contrast, during 1981 of the 354,000 beneficiaries who submitted bills for psychiatric services under Part B, 74,000 or 21 percent had incurred charges of $250 or more.8/

5. Analysis of data collected from 17 comparison facilities, matched to demonstration facilities by State and size, showed that there did not appear to be any exogenous variables at play affecting the results of the demonstration described above other than the demonstration conditions themselves.

6. Preliminary analysis of the financial offsets of the demonstration to Medicare showed no discernible impacts of the demonstration on the use of Medicare Part A benefits for inpatient treatment of a psychiatric disorder. Covered days and reimbursements by Medicare increased at approximately the same rate during the course of the demonstration in both demonstration areas and nationally. Yet, this analysis did show markedly lower use of Medicare inpatient benefits in the demonstration areas in both the Baseline and Demonstration Periods--use being lower than comparable national statistics. Covered days and reimbursements by Medicare were more than 50 percent lower per 100,000 Medicare enrollees in the demonstration areas than nationally.

7/ Lanny J. Morrison. Unit and Episode Costs of Mental Health Treatment, Macro Systems, Inc., 1979.

8/ Birmaier, Op. Cit.

MEDICARE MENTAL HEALTH DEMONSTRATION EVALUATION SUMMARY

This document describes the evaluation of the Medicare Mental Health Demonstration (MMHD). The summary is keyed to the chronology of the evaluation, and is structured as follows: (1) summary of background, design, and process of the evaluation, including limitations of the evaluation and database; (2) summary of the implementation and process assessment; (3) summary of the impact evaluation; (4) overview of the national survey; and (5) summary of the comparison group selection analysis.

1. SUMMARY OF BACKGROUND, DESIGN, AND PROCESS, EVALUATION

(1) Background

Part B of Medicare (Supplementary Medical Insurance) was enacted to provide medical insurance protection for covered services to persons 65 and over and certain disabled persons who elect this coverage. As such, Part B is designed partially as medical insurance protection for Medicare beneficiaries who are not full-time inpatients. Like any other health insurance program, Part B has a specific set of limitations on the benefits covered such as what services are covered, who is deemed qualified to render covered services, an annual deductible, and, in general, a 20 percent coinsurance whereby the Medicare beneficiary is expected to pay this portion of the "reasonable charge" for covered services.

The coverage of mental health treatment is limited, however, beyond that described above:

- The maximum amount of reimbursement for services provided by a psychiatrist or nonpsychiatric physician providing for the treatment of a mental, psychoneurotic, or personality disorder is $250 per calendar year. Medicare only recognizes a maximum of 62.5 percent of $500 of such charges, or $312.50, and will reimburse 80 percent of this amount--thus, $250. Consequently, the effective coinsurance rate is 50 percent for the first $500 of charges, and 100 percent thereafter.

- The reimbursement limit applies to expenses incurred for the "physicians' services," with no distinction made between services rendered by psychiatrists and other physicians. In addition, the reimbursement limit does not apply to the diagnostic services of a physician.

- Expenses incurred for services rendered "incident to" physicians' services are allowable if the services have been rendered by employees of the physician, under the "direct personal supervision of the physician." Direct personal supervision does not mean that the physician must be present in the same room as the employee. It does mean, however, that the physician must be present in the facility and immediately available to provide assistance and direction throughout the performance of the service. In addition, the physician bills Medicare for the services provided and is, therefore, the provider of record, rather than his or her employee provider.

  The "incident to" services must also be "usual and common" to the physician's practice. A determination of this requirement, particularly with respect to coverage of the services, is made by the cognizant Medicare carrier in adjudicating each claim. Interpretation likely differs widely among the entire group of Medicare carriers.

- Services rendered by the physician's employees outside the office setting are covered only if the physician is present.

- Diagnostic services performed by a qualified "psychologist practicing independent" of an institution, agency, or physician's office are covered as "other diagnostic tests," if the physician "orders" such tests. To qualify, a psychologist must meet educational and practice standards established by Medicare. It should be noted that such diagnostic services do not count against the maximum reimbursement limitation and that treatment services rendered by qualified, independently practicing psychologists are not covered.

Little is known about the utilization of even these limited benefits by Medicare beneficiaries. Specifically, it is not known how much was incurred for treatment rendered by private practicing physicians and psychologists versus physicians and psychologists working in organized ambulatory mental health delivery settings, e.g., community mental health centers, ambulatory clinics, and partial hospitalization programs. What is conceded generally, however, is that Medicare restrictions and complexities contribute to low utilization of outpatient services offered at these types of organized ambulatory settings by Medicare beneficiaries.9/

(2) Design

The Medicare Mental Health Demonstration was a collaborative effort of a number of organizational entities aimed at reducing these restrictions and complexities on an experimental basis. The overall project was represented by:

9/ See, for example, Task Panel Reports: Volume II, President's Commission on Mental Health, p. 506, 1978.

- Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (OS/ASPE) had overall responsibility for coordination of the demonstration and evaluation, both technically and fiscally.

- Health Care Financing Administration, Office of Research and Demonstrations (HCFA/ORD) had shared responsibility for the development and implementation of the demonstration and its evaluation.

- Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) had shared responsibility with HCFA/ORD for the development and implementation of the demonstration.

- HCFA, Office of Direct Reimbursement (HCFA/ODR) had responsibility as the fiscal intermediary for the demonstration, i.e., ODR reimburses the demonstration sites.

- Executive Resource Associates, Inc., had responsibility for developing and carrying out the protocol for the demonstration.

- Macro Systems, Inc., had responsibility for evaluation of the demonstration.

In addition, a Project Management Team, composed of OS/ASPE, HCFA, and ADAMHA representatives, had responsibility for setting the major policy parameters for the demonstration.

Forty-five sites were selected for participation in the demonstration: 15 community mental health centers (CMHCs), 15 ambulatory mental health clinics (AMHCs), and 15 partial hospitalization programs (PHPs)--although only 40 sites actually participated in the demonstration. In the selection of these sites, the following criteria were used:

- The site could not be owned or operated by a hospital.
- Community mental health centers had to be federally supported, providing at least the five initial services required by Public Law 94-63.
- The other two categories of programs (ambulatory clinics and partial hospitalization programs) had to meet the site physician supervision standards of the Rural Health Clinic Services Act (Public Law 95-210), i.e., an on-site physician at least every two weeks.
- The program had to be licensed by the State, if licensing was required.
- The partial hospitalization programs could not have an ambulatory treatment component and, conversely, the ambulatory clinics could not have a partial hospitalization component.
- All sites had to serve a high percentage of elderly compared to other such sites constituting the universe of programs in each category.

As such, the sites participating in the demonstration were not representative of the universe of ambulatory mental health treatment programs from which they were selected. The selection was, rather, purposive, and the sample is best described as such.

Each of the sites was reimbursed for the cost of all MMHD covered services on the basis of "reasonable cost," subject to retrospective adjustment. The cost of services rendered over a 24-month period, constituted the duration of the demonstration.

The parameters of the demonstration departed from existing Part B provisions as follows:

- Types Of Reimbursement--Under the demonstration, reimbursement was on a cost-related basis as opposed to the current fee-for-service or charge basis.

- Deductible--Under the demonstration, the annual amount per beneficiary was waived.

- Coinsurance--Under the demonstration, participating sites were reimbursed for 80 percent of their "reasonable costs," as opposed to the current coinsurance of 50 percent of "reasonable charges." Beneficiaries were liable for 20 percent of charges.

- Reimbursement Limit--Under the demonstration, one-half of the CMHCs and AMHCs had a reimbursement limit of $750 per beneficiary per year as opposed to the current $250 limit.10/ There was no limit for the other half of the CMHCs and AMHCs, for the PHPs, or for partial hospitalization components of CMHCs.

- Physician Supervision--Covered services had to be furnished by or as an integral part and under the direct personal supervision of a qualified mental health professional (QMHP) or non-psychiatric physician (NPP). In addition, there had to be an arrangement that provided for at least one on-site visit by a psychiatrist every two weeks. This departed from the existing unilateral reliance on physician supervision.

- Clinical Record Keeping--Individual clinical records had to be maintained on each beneficiary, including a plan of treatment, progress notes, discharge summary, and drug use profile--in conformance with standards set forth under the demonstration. Existing Part B provisions have no such requirements.

- Quality Assurance--Each participating site had to have a utilization review plan in effect. Existing Part B provisions have no such requirement.

10/ The limit applies to the amounts of reimbursement after application of the coinsurance (and deductible, under the current Medicare coverage).

- Covered Services--With certain exceptions, covered services had to be provided in and by a participating site and had to be reasonable and necessary to the diagnosis or treatment of a mental, psychoneurotic, or personality disorder. In general, covered services under the demonstration were identical to the current coverage. However, who could provide covered services and under what supervisory arrangements in order for them to be reimbursable departed from current coverage.

The QMHPs referred to above were defined by the following standards in addition to any licensing requirements imposed by a State:

- Psychiatrist--A physician who received at least three years of advanced psychiatric residency training in a program approved by the Residency Review Committee for Psychiatry and Neurology of the American Board of Psychiatry and Neurology (as representatives of the American Board of Psychiatry and Neurology and the Council on Medical Education of the American Medical Association (AMA), or who is certified in psychiatry by the American Board of Psychiatry and Neurology, or who is Board-eligible.

- Psychologist--An individual (a) licensed or certified by the State in which he/she works for the independent practice of psychology or, if the State does not provide such licensure or certification, is either included in the Register of Health Service Providers in Psychology or eligible for such inclusion by virtue of having earned a doctoral degree in psychology from a regionally accredited educational institution and, (b) in any case, having two years of supervised clinical experience in health service delivery in an organized care setting, at least one of which is postdoctoral.

- Psychiatric Social Worker--An individual possessing a master's degree from an accredited school of social work and who has at least two years of supervised experience in psychiatric social work after receiving the master's degree. In States that license social workers, the individual must be licensed.

- Psychiatric Nurse--A registered professional nurse, currently licensed in the State in which services are delivered, who has a master's degree in psychiatric/mental health nursing and at least two years of supervised experience.

All of the above elements were the key ones comprising the MMHD, although there were others further defining its coverage and operations.

The evaluation of the Medicare Mental Health Demonstration had three primary objectives:

- To determine the effects of the demonstration on beneficiary and service utilization

- To determine the effects of the demonstration on the administration and operations of the demonstration sites

- To determine the costs to Medicare for the demonstration benefit package, including possible financial offsets to Medicare that may occur.

As secondary foci, the evaluation measured and analyzed exogenous variables potentially affecting the emphasis of the primary objectives as well as limited client outcome measures.

The basic structure of the evaluation called for the collection and analysis of specific information by which to meet the evaluation objectives. Two time periods were relevant to this structure:

- Baseline Period--A two-year period immediately prior to the demonstration's implementation (April 15, 1979 to April 14, 1981).

- Demonstration Period--The two-year period during which MMHD reimbursement to the sites occured (April 15, 1981 to April 14, 1983).

Thus, information relevant to meeting the evaluation objectives were collected from and analyzed for the demonstration sites for these two time periods.

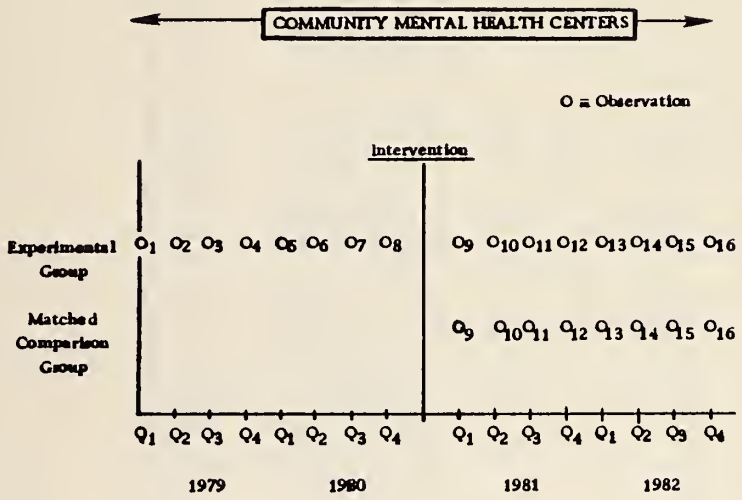
Because of the lack of randomization in the selection of the demonstration sites and to help ensure the internal validity of the evaluation, comparison sites were being used for control purposes. Using matched demonstration and comparison sites resulted in the overall design of the evaluation known as a 2^3 factorial nonequivalent control group design, as illustrated in Exhibit 1. In such a design, it is possible to state, with increased certainty, that any observed effects among the group of demonstration sites were indeed attributable to the demonstration. It should be noted that the original design called for 30 matched CMHCs and AMHCs (no PHPs) in the comparison group and examination of prewaiver equivalency between the experimental and comparison group. The design was modified to take into account the availability of PHPs to be included in the comparison group and the fact that comparison group members would not agree to provide data for the pre-waiver time period. Exhibit 1 is the final study design.

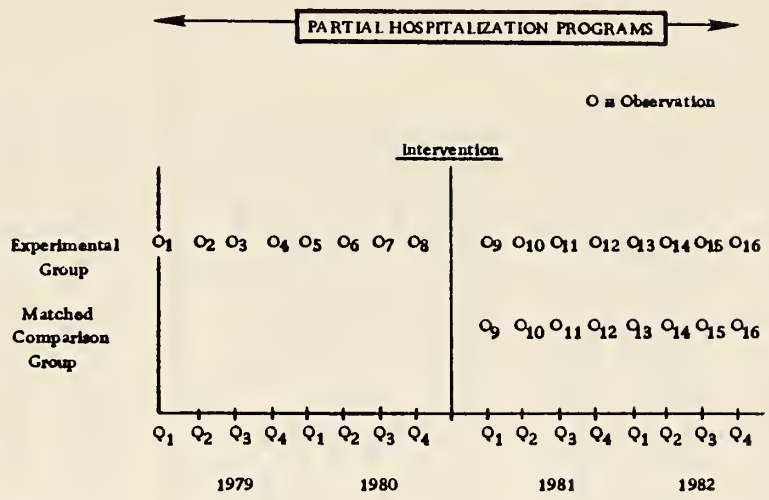
Also, to address the representativeness of the demonstration sites, a national survey of the universe of ambulatory mental health programs was mounted. This helps ensure the external validity of the evaluation and allows for projections of the the cost to Medicare if the waivers were applied nationally.

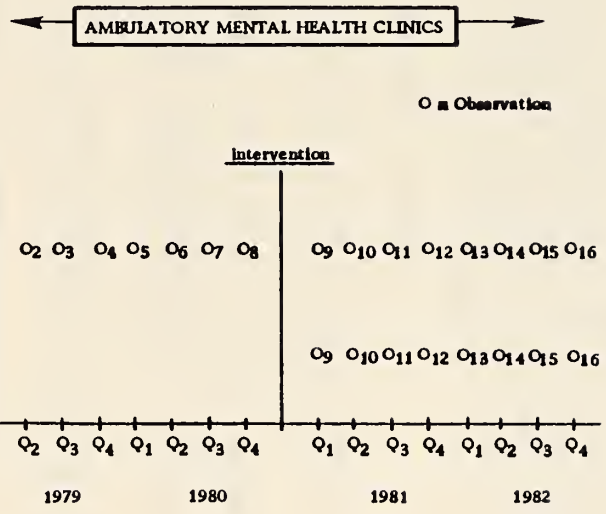
EXHIBIT 1

HHS, Office of the Secretary

MMHD EXPERIMENTAL DESIGN







The conceptual framework for evaluation of the Medicare Mental Health Demonstration had three components:

- Implementation Assessment--To attribute any possible effects to the parameters of the demonstration, it was necessary to know the extent to which these parameters were implemented and when.

- Process Evaluation--Demonstration sites had, to a certain degree, flexibility in how the demonstration was operated at each site. This component of the evaluation focused on the site-specific operation of the demonstration, which was important in understanding and attributing possible effects.

- Impact Evaluation--The policy questions posed by the MMHD relate most directly to the effects of the demonstration on beneficiary utilization of MMHD services, the effects of the demonstration on the beneficiaries, the costs to Medicare for the demonstration, the effects of the demonstration on the participating sites, and the effects of the demonstration on the quality of care beneficiaries received--all impact questions. These questions are rank-ordered in terms of their importance to the policy implications of the demonstration and its evaluation.

The impact evaluation focused on six major questions:

- How was the utilization of ambulatory mental health services affected by the demonstration?

- How was the beneficiary population affected by the demonstration?

- How were the costs, charges, and reimbursements for ambulatory mental health services affected by the demonstration?

- How were the characteristics of participating sites affected by the demonstration?

- Was the quality of care affected by the demonstration? If so, how?

- Were there any offsets to Medicare?

The utilization and cost questions were designed to facilitate examining whether the coverage of ambulatory mental health benefits under the demonstration offered compensatory savings to the Medicare program by reducing utilization and costs of other benefits. The offset question, only partially addressed in this report due to limited data availability from HCFA, will be fully addressed in an addendum to the final report.

The evaluation was designed so as to address each of the impact questions posed above. Conceptually, this was done through collection of data relevant to each question and the analysis of such data as follows:

- Baseline and demonstration period analysis on the demonstration sites

- Demonstration period analysis between the demonstration and comparison sites

Data from HCFA, both ORD and ODR, Executive Resource Associates, and visits to the demonstration sites were used to prepare site-specific case studies relevant to the implementation assessment and process evaluation components of the evaluation. In general, data for the impact evaluation emanated from three sources:

- HCFA Files--Demonstration sites made claims to ODR on a continuous basis throughout the demonstration period. ODR provided tapes of such transactions. In addition, HCFA reports on beneficiaries residing in the demonstration sites' service areas were accessed.

- On-Site Visits--Visits to each demonstration site were made to collect beneficiary-specific demographic, service, reimbursement, outcome, and programmatic data. These data were obtained through record abstracts and interviews.

- Self-Reports--Comparison sites reported by mail on beneficiary-specific and programmatic data elements.

(3) Process

As indicated, several different sources were tapped to obtain information of a beneficiary-specific nature. This summary contains analyses based on a database of information derived from files of 40 demonstration facilities, 17 comparison facilities, and over 11,000 beneficiaries.

(4) Limitations

The demonstration and evaluation designs were subject to several limitations:

- Random Selection--The demonstration sites were not selected at random, which affects the generalizability of the demonstration results. Although use of the comparison group and a national survey enhance generalizability, the lack of randomization does have some impact on the effects observable through the demonstration.

- Beginning The Demonstration At Other Than The Start Of The Calendar Year--The demonstration started during the middle of the calendar year. Because the $750 reimbursement limit applied to the entire calendar year and because the first year of the demonstration was less than a full calendar year, some beneficiaries did not reach the reimbursement limit who might

normally have done so during a full 12-month period. This, therefore, affected the utilization and cost elements for the first year of the demonstration--a fact that could not be completely controlled by any statistical analysis. This limitation was heightened by the fact that five replacement sites participated for a much shorter period than the others during the first calendar year of the demonstration. Finally, by starting the demonstration other than at the beginning of a calendar, a third year was involved but of a very short duration (3 1/2 months). This third year was subject to the same limitations as the first year, only to a greater degree.

- Beginning The Demonstration At Different Times In Different Sites--Some sites already had the capability to fulfill the MMHD requirements; others took early steps to do so; and still others did not. For this reason, several sites delayed somewhat, in comparison to other sites, in implementing the demonstration. The implementation assessment and process evaluation components of the evaluation document this evolutionary implementation. Because this occurred, it means that there was not total comparability in the database across sites participating in the demonstration.

- Beneficiary Population--The focus of the evaluation was on those beneficiaries who used MMHD covered services at the demonstration sites. To make projections of future Medicare costs if the waivers were applied nationally, a secondary focus must be beneficiaries residing in each site's service area. Estimates of the proportion of the beneficiaries residing in the service areas served by demonstration sites (estimates of consumer demand) can only be approximations and not precise estimates.

- Data Quantity And Quality--The ability to address all evaluation questions depended upon the quantity and quality of the data collected. While provisions were made in the evaluation to maximize data quantity and quality, some gaps did occur. Thus, some questions were not fully answerable.

2. SUMMARY OF THE IMPLEMENTATION AND PROCESS ASSESSMENT

Implementation information is critical in making certain that the MMHD was put into operation according to the design of the demonstration. Unless it is known that the demonstration was or was not operating according to its design, information on why particular outcomes were observed becomes extremely limited. Furthermore, until the demonstration had been implemented and the "treatment" (in an experimental design sense) was believed to be in place, there existed little reason to evaluate impacts of the demonstration.

From the perspective of implementation assessment, there were four important events in time examined:

- Date waivers were approved
- Beginning reimbursement date
- Date facility met all demonstration requirements
- Effective facility implementation date

The demonstration time period was originally planned for January 1, 1981 to December 31, 1982. In November 1980, the 45 candidate facilities were invited to attend a two-day orientation and training conference (four such conferences were held: one in Washington, D.C., two in Dallas, Texas, and one in Atlanta, Georgia). The focus of each conference was on the orientation of the programs to the requirements of the demonstration, with specific training on the completion of cost reports and bills. The beginning point of the demonstration was changed from January 1, 1981 to April 15, 1981 due to a delay in obtaining approval of the waivers necessary to commence the project. The facilities were notified of the delay and their participation was formally requested in March 1981.

Not all 45 facilities originally solicited chose to participate. Shortly before the training session two community mental health centers declined participation and afterwards three community mental health centers, three ambulatory clinics, and two partial hospitalization facilities declined participation. The community mental health centers declining participation before training were replaced immediately by other community mental health centers, which participated in the training as scheduled.

Of those declining participation after the training session, all but one of the ambulatory clinics declined immediately and were replaced. The one ambulatory clinic declined after a prolonged period of decision-making and a policy decision was made not to replace this facility. Replacement of other sites was made using criteria identical to those used in the selection of original sites. All of the replacement facilities were trained on-site by HCFA/ODR. Subsequent to those replacements, one original AMHC and one original PHP dropped out, and one of the replacement CMHCs and one of the replacement AMHCs declined to participate, bringing the total participants to 40: 14 CMHCs, 12 AMHCs, and 14 PHPs. Exhibit 2 shows the geographic distribution of the participating facilities.

The facilities declining participation did so for a variety of reasons. A prevalent reason stated was that participation in the demonstration would affect other funding sources. This is common in those States whose State Mental Health Agencies fund community-based programs on a "deficit financing" basis. That is, for each dollar earned through the demonstration, a facility would lose one dollar in State grant-in-aid support. Other reasons cited included that the demonstration requirements would necessitate too many changes in the facility's operations, the facility could not feasibly meet some of the requirements, and the cost reporting and billing requirements were too complex.

Because of the relative lateness of securing the participation of the replacement facilities, a policy decision was made that these facilities would

LOCATION OF SITES PARTICIPATING IN THE MEDICARE MENTAL HEALTH DEMONSTRATION

receive reimbursement under the demonstration from October 1, 1981 to April 14, 1983--five and one-half months less than the other facilities.

Exhibit 3, following this page, shows the date each facility executed its Memorandum of Agreement (MOA), the contractual agreement of participation, and the month for which each facility received its first reimbursement under the demonstration. The exhibit shows the evolutionary nature of the demonstration in that not all facilities availed themselves of the full time frame for which reimbursement was possible under the demonstration. For one-quarter of the facilities participating in the demonstration, the "effective" demonstration period was less than the two years authorized by the waivers.

Subsequent to the start of the demonstration, numerous questions were forthcoming from the participating facilities. Some of the guidelines or procedures of the demonstration were refined and clarified based on these questions, including the following:

- Development of a compliance review and monitoring effort
- Allowance for coverage of ambulatory services "ancillary" to partial hospitalization
- Refinement of covered diagnosis categories
- Setting of "reasonable cost" limits

Overall, $10,840,697 was paid out under the demonstration of which $6,008,668 (55 percent) was to CMHCs, $2,274,074 (21 percent) was to AMHCs, and $2,557,952 (24 percent) was to PHPs--summarized in pie chart form in Exhibit 4. For the first year of the MMHD (April 15, 1981, to April 14, 1982), $4,687,482 (43 percent of the total) was paid to the facilities. The remaining $6,153,215 (57 percent of the total) was paid during the second year. The average total outlay for participating facilities was as follows:

- All Facilities--$285,282 ($142,641 per year)
- CMHCs--$462,205 ($231,103 per year)
- AMHCs--$189,506 ($94,753 per year)
- PHPs--$196,766 ($98,383 per year)

3. SUMMARY OF THE IMPACT EVALUATION

This section reports quantitative and qualitative measures of the impact of the demonstration waivers. As distinguished from the implementation assessment and process evaluation, impact evaluation focused on a number of specific beneficiary outcome measures relating to service utilization. It also focuses on program outcome measures relating to shifts in service delivery, changes in the cost of providing services, and standards set for professionals.

EXHIBIT 3

HHS, Office of the Secretary

DEMONSTRATION FACILITY IMPLEMENTATION

Facility	Date Facility Signed Memorandum of Agreement	First Month For Which Facility Received MMHD Reimbursement *
Community Mental Health Centers		
01	3/25/81	April
02	3/25/81	April
03	4/1/81	April
04	3/31/81	April
05	3/24/81	April
06	3/26/81	April
07	4/21/81	April
08	3/23/81	April
09	4/1/81	April
10	3/23/81	April
11	6/9/81	August
12	5/5/81	May
13R	7/28/81	October
14R	7/31/81	January 1982
15R		No reimbursement--Dropped out
Ambulatory Mental Health Clinics		
16	4/30/81	July
17	4/27/81	May
18	4/13/81	April
19	5/8/81	No reimbursement--Dropped out
20	4/21/81	July
21	4/29/81	July
22	3/26/81	No reimbursement--Dropped out
23	3/26/81	April
24	3/25/81	April
25	4/13/81	April
26	3/23/81	April
27	4/22/81	April
28	4/7/81	April
29R	8/13/81	October--Dropped out
30R	7/23/81	October
Partial Hospitalization Programs		
31	3/30/81	April
32	4/1/81	April
33	4/1/81	April
34	5/4/81	June--Dropped out
35	4/15/81	May
36	3/27/81	April
37	3/24/81	April
38	3/26/81	April
39	3/31/81	April
40	3/23/81	April
41	3/25/81	April
42	3/21/81	April
43	4/15/81	May
44R	8/19/81	October
45R	7/31/81	October

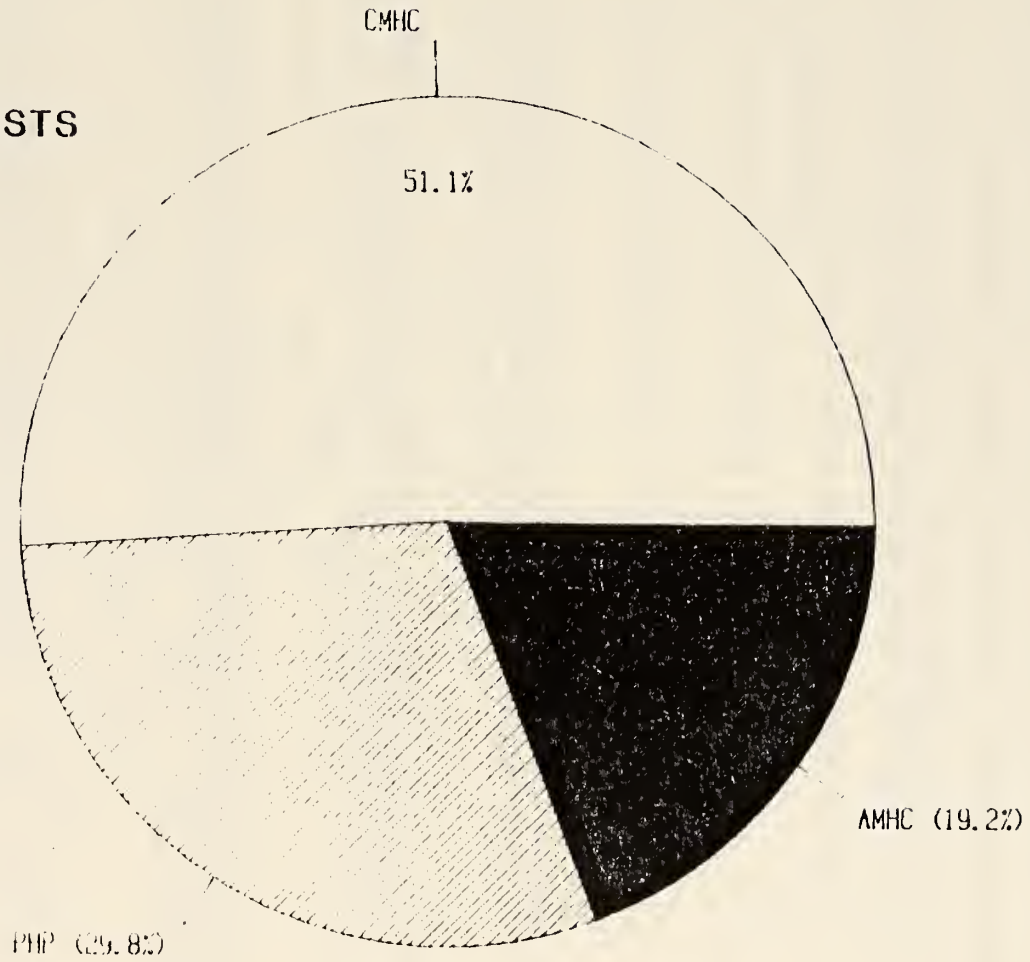
R = Replacement Site
* = Dates are 1981 unless other wise noted

EXHIBIT 4

HHS, Office of the Secretary

TOTAL DEMONSTRATION PAYMENTS
BY FACILITY TYPE

BASED ON UNAUDITED COSTS



As noted earlier, there were six major analysis questions addressed in the impact evaluation, five of which are reported on in this section.

- How was the utilization of mental health services affected by the demonstration?
- How was the beneficiary population affected by the demonstration?
- How were the costs, charges, and reimbursements for ambulatory mental health services affected by the demonstration?
- How were the characteristics of participating sites affected by the demonstration?
- Was the quality of care affected by the demonstration? If so, how?

Each of these major analysis questions had a number of research questions associated with it.11/

The analyses reported here represent prewaiver (baseline) and postwaiver (demonstration) comparisons of a number of beneficiary outcome measures. Four different types of statistical tests were employed:

- Two-sample t-test of means testing the hypothesis that a baseline mean was significantly different from a demonstration mean; i.e., the null hypothesis H_o: $X_{Base} = X_{Demo}$ against the alternative hypothesis that H_A: $X_{Base} \neq X_{Demo}$
- Two-sample z-test of proportions testing the hypothesis that a baseline proportion was significantly different from a demonstration proportion; i.e., the null hypothesis H_o: $P_{Base} = P_{Demo}$ against the alternative hypothesis that H_A: $P_{Base} \neq P_{Demo}$
- Chi-square test of independence testing the hypothesis that a baseline distribution was significantly different from a demonstration distribution; i.e., the null hypothesis H_o: $f(i)_{Base} = f(i)_{Demo}$ against the alternative hypothesis that H_A: $(f(i)_{Base} \neq f(i)_{Demo}$
- Two-way unbalanced analysis of variance testing the significance of the effect of each independent factor and the two-way interaction of factors; a classical regression approach (general linear model) was employed, that partitioned individual effects by adjusting for all other effects

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11/ See Evaluation Plan for the Medicare Mental Health Demonstration, submitted to the Office of the Assistant Secretary for Planning and Evaluation. Prepared by Macro Systems, Inc., March 9, 1981.

The results of each of the above tests were reported against the p less than .05, p less than .01, and p less than .001 levels of significance.

A few additional analytical considerations should be noted. Initially, CMHCs were considered as providing one distinct service component, and statistical data were aggregated across all CMHC beneficiaries and facilities. However, as the demonstration progressed, it was found that a substantial number of CMHCs were utilizing partial hospitalization as a major service component. The utilization and cost of the services provided to these partial hosptialization beneficiaries was believed to be quite different from the CMHC beneficiaries receiving outpatient or ambulatory service only. For this reason, we chose to report the data separately for separate service components, where applicable.

One additional analytic consideration relates to the reporting of primary diagnosis. For purposes of analysis and reporting of beneficiary diagnosis and its relationship to service utilization, it was necessary to collapse the primary diagnoses into 10 categories. Although this is undesirable from a clinical standpoint, it was necessary for identifying statistical relationships.

In reviewing the summary findings, it is important to keep in mind that they emanate from a database composed of the following:

- 11,680 beneficiaries have coversheet information (name, HIC, ID)
- 11,234 beneficiaries have characteristics data (demographics)
  - 5,933 of these beneficiaries entered treatment before April 15, 1981
  - 5,301 of these beneficiaries entered treatment after April 15, 1981
- 10,741 beneficiaries have services data (either from Macro field visits or from ODR billing tapes)
  - 1,139 of these had services prior to April 15, 1981, only (baseline only)
  - 6,638 of these had services subsequent to April 15, 1981, only (demonstration only)
  - 2,964 of these had services in both the baseline and demonstration periods

This means that 446 beneficiaries were not represented with characteristics data, and 939 beneficiaries were not represented with services data, because the limited resources for the evaluation precluded more than one site visit to obtain such data.

We address each of the five major questions briefly below, summarizing the major findings:

How Was the utilization of mental health services affected by the demonstration?

Between the baseline and demonstration periods, there were significant increases in the percentage of beneficiaries receiving individual therapy (48 percent to 60 percent), group therapy (15 percent to 19 percent), partial hospitalization (16 percent to 20 percent), and other services (16 percent to 22 percent). There were significant decreases in the percentage of beneficiaries receiving medication therapy (36 percent to 15 percent), other therapeutic services (13 percent to 6 percent), and psychiatric/psychological exams (33 percent to 20 percent). These general findings were true, irrespective of the age of beneficiaries served (over 65 or under 65, as groups) or whether or not the beneficiaries had had previous mental health treatment prior to their entry into]the demonstration facilities. Also, CMHCs, AMHs, and PHPs provided beneficiaries with a different array of services.

The distributions of ambulatory service encounters were significently different (p less than .001) for all facility types, age groups, and levels of previous mental health treatment between the baseline and demonstration periods. However, because the Ns (number of encounters) involved were so substantial, the statistical tests had very high power. Comparing the baseline period to demonstration period, individual therapy constituted a higher percentage of the total service encounters (33 percent to 48 percent) than did group therapy (19 percent to 23 percent), with a corresponding decrease in medication therapy encounters (23 percent to 7 percent). This pattern of change was accentuated in the PHPs. The same general pattern of change was evident for younger and older beneficiaries and beneficiaries with and without previous mental health treatment.

There were significant increases (p less than .001) in the percent of beneficiaries receiving services delivered by the following:

- QMHP psychologist (7 percent to 11 percent)
- Psychiatric social worker (23 percent to 47 percent)

Significant increases (p less than .001) in the percent of beneficiaries receiving services delivered by the following non-QMHPs were also experienced:

- Nonpsychiatric physician (1 percent to 6 percent)
- Counselor (8 percent to 19 percent)

The percent of beneficiaries receiving services from the other categories of providers decreased. Some of these observed changes are likely due to more specific reporting of services in the demonstration period, particularly the large decrease in the "other" category (21 percent to 17 percent).

For CMHCs, the percentage of beneficiaries servced by QMHP psychologists decreased (CMHC-OP from 7 to 6 percent and CMHC-PH from 15 to 7 percent), unlike the AMHCs and PHPs. The percent of beneficiaries served by psychiatrists decreased in AMHCs (57 percent to 43 percent). In PHPs, the percentage of beneficiaries served by psychiatric social workers and counselors decreased in contrast to CMHCs and AMHCs. However, the percentage of beneficiaries served by psychiatrists increased dramatically in PHPs (19 to 67 percent) clearly as a result of MMHD.

The percent of beneficiaries served by psychiatric social workers increased more dramatically for beneficiaries aged 65 and over (25 percent to 56 percent) and for beneficiaries with no previous mental health treatment (29 percent to 57 percent) than for the younger (22 percent to 35 percent) and previously treated populations (23 percent to 38 percent). This reflects the increased use of the psychiatric social worker with the new (to mental health treatment) elderly and less disabled beneficiaries served in the demonstration period.

The distributions of service encounters across type of personnel were significantly different (p less than .001) for all facility types, age groups, and levels of previous mental health treatment. However, because the Ns (number of encounters) involved were so substantial, the statistical tests had very high power. The percentage of encounters provided by QMHPs increased, particularly for psychiatric social workers, although the percentage for psychiatric nurses remained unchanged.

- Psychiatrist (20 percent to 28 percent)
- QMHP psychologist (2 percent to 5 percent)
- Psychiatric social worker (13 percent to 33 percent)

Corresponding decreases were observed for the non-QMHPs, as would be expected under the demonstration. The increase in the encounters provided by psychiatrists was particularly evident in the PHPs, where the percentage increased sevenfold (6 percent to 40 percent), reflecting the added use of the psychiatrist to meet, at a minimum, MMHD psychiatric supervision requirements.

The percentage of encounters provided by the psychiatrists decreased in the AMHCs (25 percent to 16 percent); this was largely offset by a substantial increase in the service encounters provided by psychiatric social workers (14 percent to 51 percent). The percentage of service encounters provided by psychiatric social workers increased more substantially for the older and previously untreated populations.

. How was the beneficiary population affected by the demonstration?

From the baseline to the demonstration period, utilization of demonstration facilities increased significantly from 186 per 100,000 Medicare enrolless to 377 per 100,000 Medicare enrollees, although this utilization was less than 1 percent of all Medicare enrollees living in areas served by demonstration facilities. These beneficiaries represented 13.5 percent of the total MMHD facility caseload in the baseline period and 11.4 percent of the total MMHD facility caseload in the demonstration period--a statistically significant decrease, reflecting an increase in non-Medicare users of demonstration facilities. Similarly, the proportion of the encounters made by MMHD facilities attributed to Medicare beneficiaries decreased throughout to the demonstration period.

The demographic characteristics of Medicare beneficiaries treated in MMHD facilities also showed significant differences between those treated only in the baseline period (Baseline Only Group), those admitted during the baseline period, and also served during the demonstraton period (Baseline and Demonstration Group), and those admitted and served only in the demonstration period (Demonstration Only Group):

- Age--There was a significant difference in the age of beneficiaries served in all types of demonstration facilities among the three groups. These differences reflect that the majority of beneficiaries served in the Baseline Only and Demonstration Only groups were elderly, whereas the majority served in the Baseline and Demonstration Group were the younger, disabled Medicare population. Such differences were also discernible for CMHC-OP and the AMHC clients (the elderly) and CMHC-PH and PHP clients (the disabled). The distributional differences are also borne out by the median age differences.

- Sex--Overall, the proportion of female beneficiaries served in MMHD facilities was significantly different (p less than .001) in the Demonstration Only group from the Baseline and Demonstration group for all facility types, and between the Baseline Only and Demonstration Only groups (p less than .05). The only other notable significant differences were between the Baseline Only and the other two groups specifically regarding the elderly.

- Race--There were proportionately fewer minority group members in the Demonstration Only group that were 65 and over (13 percent) than in the Baseline Only (15 percent) and the Baseline and Demonstration (19 percent) groups. There were a higher proportion of minority group members among those under 65.

- Marital Status--Of beneficiaries under 65, the proportion of single persons in PHPs were significantly different between the Baseline Only and the Baseline and Demonstration groups (p less than .001) and the Demonstration Only and the Baseline and Demonstration groups (p less than .05). Similarly, among the elderly in AMHCs, there were significant differences in the proportions of widowed individuals.

- Previous Mental Health Treatment--There was significant differences in the proportion of beneficiaries with some previous mental health treatment in all facilities between the Baseline Only group and the other two groups. There were significantly fewer beneficiaries in the Demonstration Only group with some previous treatment than in the Baseline and Demonstration group (66 to 85 percent). Of beneficiaries 65 and over, there were a significant difference between these two groups in the proportion without some type of previous treatment (p less than .001) and in all facilities except PHPs. These findings show the demonstration reaching a previously untreated population.

  The patterns of previous psychiatric care showed a significantly higher proportion of previous hospitalization among the Baseline and Demonstration group when compared to the two other groups, reflecting the membership of the chronically mentally ill among this group. Among the elderly, the Demonstration Only group showed a significantly lower proportion of previous hospitalization when compared to the Baseline Ony group.

- Primary Diagnosis--For those under 65 in the Baseline and Demonstration Group, there was a significantly higher (p less than .001) proportion of beneficiaries with a schizophrenic disorder, when compared to the other two groups. Among the elderly in the Baseline and Demonstration group, there was a significantly higher (p less than .001) proportion of beneficiaries with schizophrenic disorder, when compared to the other two groups. Conversely, there was a significantly higher (p less than .001) proportion of beneficiaries in the Demonstration Only group diagnosed as having an adjustment disorder, when compared to the other two groups. In general, these patterns were observed across facility types, except for the under-65 population in CMHC-PHs and PHPs and 65 and over population in AMHCs and PHPs. Thus, the benediciary appeared to have attracted a less severely ill population in the demonstration period.

- Referral Source--There was a significantly larger (p less than .001) proportion of referrals from self, family and friends, and other mental health centers among Demonstration Only beneficiaries, when compared to Baseline Only

beneficiaries. Conversely, there was a significantly smaller (p less than .001) proportion of referrals from State mental hospitals and other mental health practitioners when comparing these two groups. The same patterns were observed when comparing the Baseline and Demonstration group to the Baseline Only group, except there was also a significantly larger (p less than .001) proportion of referrals from hospitals in the former group. Among those under 65, there were significantly larger (p less than .001) proportions of referrals from ICFs and SNFs in the Demonstration Only group, when compared to the Baseline and Demonstration group. Among the elderly, this was also evidenced by SNFs.

- Living Arrangement--Among AMHC clients, a significantly lower proportion resided in ICFs and SNFs in the Demonstration Only and Baseline and Demonstration groups, when compared to the Baseline Only group. This was also evident for both age groups. Among CMHC-PHs, a significantly higher proportion lived with relatives in the Baseline and Demonstration group, when compared to the other two groups.

- Income--The proportion of all beneficiaries with Social Security as a source of income was significantly lower (p less than .001) in the Baseline Only group, when compared to the other two groups. This may have been more a function of demonstration facilities not recording income sources rather than a fact, as the relatively small N's would imply. The proportion of beneficiaries with public assistance as a source of income was significantly lower (p less than .001) in the Demonstration group, when compared to the other two groups, overall and for both age groups. The monthly income for all beneficiaries was significantly higher in the Demonstration Only group (p less than .001), irrespective of age, when compared to the other two groups. However, this may be as much a function of time of entry into treatment as an actual higher monthly income amount.

- Potential Payor Source--There was a significantly higher proportion (p less than .001) of beneficiaries (primarily the elderly) with private insurance as a payment source in the Demonstration Only group, when compared to the other two groups. Conversely, self-pay and Title were significantly lower.

The comparison of beneficiary characteristics among the three groups show that the demonstration reached a beneficiary population that had not been previously treated. This population was, in general, elderly, white, female, living at home or with friends and on Social Security, and less severely disordered than the population entering or served in the baseline period.

How Were the charges, costs, and reimbursements for mental health services affected by the demonstration?

Between the baseline and the demonstration period, charges per encounter of ambulatory mental health service increased by only 4 percent in the demonstration ($28 to $29). Charges per hour of partial hospitalization decreased from the baseline to the demonstration ($8 to $6), although it should be noted that only 5,100 hours of partial hospitalization were charged in the baseline as opposed to more than 800,000 hours in the demonstration. These findings are inconclusive, however, as the quantity of baseline data was very small as compared to the data available from the demonstration.

When considered on a per beneficiary basis, charges increased substantially for AMHCs, with and without the $750 limit, and for PHPs, but decreased by 14 percent for CMHCs. The limit facilities had substantially higher per beneficiary charges than the no limit facilities in the baseline period ($548 to $182) but not in the demonstration period ($534 to $585). The PHPs experienced the greatest increase in charges per beneficiary ($267 to $1,563) and CMHCs the least. For the most part, charges per beneficiary increased at a faster rate for the elderly than for the younger population.

Overall, 56 percent of the beneficiaries in the $750 limit facilities reached the limit; 47 percent of the beneficiaries in CMHCs with the limit and 65 percent of beneficiaries in AMHCs with the limit reached the $750 limit of reimbursement for the one full calendar year of the demonstration. Overall, some 55 percent of all beneficiaries (without regard to the limit) had annual charges less than $250.

As has been noted, the demonstration was based on cost-related reimbursement principles. Few, if any, of the facilities had ever operated under such a scheme before--most were only familiar with charge-based methodologies if they were familiar with any at all. For this reason, cost data relating to the baseline were not available from the facilities. Thus, the description that follows refers only to the demonstration.

Across all providers and facilities in the demonstration, the cost per encounter of ambulatory mental health service was $47 for the entire demonstration, $44 in the first year and $49 in the second. The cost per encounter varied by type of facility (CMHC--$44, AMHC--$52, PHP--$18). The cost per encounter also varied by type of provider with the QMHP providers typically being associated with higher costs. Overall, partial hospitalization costs were $8 per hour, with PHPs providing 61 percent of the hours of this type of service (at $6 per hour), and CMHCs 39 percent (at $12 per hour). There was wide variability in the cost per hour across facilities ranging from $2 per hour to $30 per hour.

To construct per beneficiary costs, one must combine costs associated with encounters and costs associated with hours. In doing so, it was found that just over 56 percent of the costs associated with the demonstration were attributable to partial hospitalization services provided in both CMHCs and PHPs. Overall, the total cost per beneficiary for the entire demonstration was $1,020 ($1,012 for CMHCs, $598 for AMHCs, and $2,871 for PHPs). CMHCs with a limit had average total cost per beneficiary nearly 50 percent higher than the no limit CMHCs ($1,267 to $879); the converse was true for AMHCs.

. How Were the characteristics of participating sites affected by the demonstration?

Changes took place in demonstration facility administration as a result of the MMHD. These changes are grouped into seven areas for analysis: (1) program characteristics, (2) staffing, (3) clinical personnel management, (4) client flow, (5) services, (6) administration and management, and (7) public awareness.

The following is a narrative synopsis of changes or effects of the demonstration. In general, program characteristics did not change significantly as a result of the demonstration. Several facets of the demonstration did have, however, a noticeable and significant impact on the staffing patterns of the facilities. One was the requirement for QMHP supervision coupled with the definition of the QMHPs. Another major change attributed to the demonstration was the increase in psychiatrists' time necessary to comply with the requirements that a psychiatrist review and approve all treatment plans and be available on site at least once every two weeks. Staffing changes were also necessary in many facilities to comply with the billing process and cost reporting requirements. QMHP review of treatment plans and the attendant requirements for a written utilization review/quality assurance plan also required some staffing changes as well as developmental efforts. Generally, the flow of clients through the facilities did not change, although the relationship with some staff did, as their clinical responsibilities were altered by the demonstration requirements. The array of services available to Medicare beneficiaries before the MMHD was quite similar to that available during the demonstration. In terms of overall administration and management responses to the requirements of the demonstration, two areas clearly surfaced as having been impacted. One relates to the general expansion of clinical record-keeping activities and forms and the other with the requirement for billing coinsurance to the beneficiary, which largely had not been done in the past. The development and preparation of cost reports and bills also had had a major impact on facility administration in terms of the need for additional financial staff time. A wide variety of public awareness vehicles were utilized by the facilities to reach Medicare enrollees.

- Was the quality of care affected by the demonstration?

  The analysis of beneficiary termination data pertaining to the outcome dimension of quality of care show that, in general, beneficiaries fared no worse under demonstration conditions than prior to the demonstration, regarding termination status, reasons for unplanned termination, tretment outcome (gross clinical impression at termination), and referral measures. It should be noted, however, that the number of cases terminated was so small (particularly during the Baseline Period) that the proportional distributions were subject to relatively small changes in individual cells. In addition, the number of cases in which treatment outcome could not be imputed was considerable in both the Baseline (14 percent) and Demonstration (19 percent) periods, so that findings may be somewhat spurious.

  The analysis of the structure and process dimensions of quality of care show the demonstrable effects of the MMHD on these dimensions. Staffing, physician supervision, utilization review/quality assurance, and clinical recordkeeping effects of the demonstration were particularly noteworthy.

4. SUMMARY OF COMPARISON GROUP ANALYSIS

Because of the lack of randomization in the selection of the demonstration facilities and the certainty of their nonrepresentativeness of the universe of ambulatory mental health treatment facilities (see next section), a group of comparison facilities was used for control purposes. Fifty-two primary and alternate comparison facilities were identified that matched demonstration facilities on the following bases:

- State in which the facility operates
- Size of the facility
- Demonstration requirements
- High percent of Medicare beneficiaries served
- Experience with Medicare

After considerable negotiations, 17 facilities--5 community mental health centers, 9 ambulatory mental health clinics, and 3 partial hospitalization programs--agreed to participate as members of the comparison group. Each one of these facilities reported to us on the characteristics of and use of services by Medicare beneficiaries in the facility during the demonstration period. In addition, these facilities reported on facility characteristics.

Below, we present highlights of the comparison group/demonstration group analysis:

- Beneficiary Characteristics--The analysis of beneficiary characteristics, particularly diagnosis, previous mental health treatment and referral source, shows a similarity between the comparison group and demonstration group in the baseline period. This is to be expected without an incentive to attract a new population for services, as shown for the demonstration facilities in the demonstration peiod.

- Service Utilization--Although there were substantial differences in types of services used by the two groups, these differences could be readily attributed to alternative therapeutic philosophies or practice styles. Overall, the average number of encounters per beneficiary were comparable although slightly higher (nearly three times higher in PHPs) in the comparison group, as compared to the demonstration group (in the baseline period), as shown below:

AVERAGE NUMBER OF ENCOUNTERS PER BENEFICIARY

	Comparison Group	Demonstration Group (Baseline Period)
All	18.3	14.3
CMHC	15.8	14.6
AMHC	16.0	13.9
PHP	37.0	14.2

Demonstration facilities emphasized encounters with QMHPs, particularly psychiatrists and psychiatric social workers. The distribution of encounters in comparison facilities was similar to the distribution of encounters in demonstration facilities during the baseline period.

- Charges--Slightly less than $200,000 was charged to Medicare by comparison facilities; there were no charges from PHPs. For CMHCs, charges per beneficiary ($26.40) were four times higher in demonstration facilities than in comparison facilities. For AMHCs, charges per beneficiary ($30.31) were 2½ times higher in demonstration facilities than in comparison facilities. These findings were consistent with the overall charges and charges per beneficiary by demonstration facilties during the baseline period.

- Quality Of Care--In terms of the quality of care measures used, the comparison and demonstration groups had comparable results. This means that there did not appear to be any exogenous variables at play affecting quality of care in the demonstration facilities.

. Program Operations--Given that comparison facilities were selected within the same States as demonstration facilities and based upon the same size as demonstration facilities, it was not surprising that the characteristics and operations of the comparison facilities and demonstration facilities were similar. There were several noteworthy exceptions:

- Staffing--In general, the staffing patterns between the comparison and demonstration facilities were similar. However, for the PHPs in the comparison group, there was little if any psychiatric involvement which paralleled the PHPs in the baseline period.

- Clinical Management--Although staffing patterns were similar, QMHPs were not necessarily in clinical supervisory positions in comparison facilities. This was analogous to demonstration facilities in the baseline period. Also analogous to the baseline period, psychiatrists in comparison facilities did not always approve treatment plans or monitor treatment.

- Services--In general, the types of services offered by both groups were similar. However, off-site services in comparison facilities were generally provided by non-QMHPs, analogous to the baseline period in demonstration facilities.

- Administration And Management--In general, the comparison facilities had neither utilization review programs nor the types of clinical records of the demonstration facilities during the demonstration period. With respect to the latter, treatment plans were generally not as comprehensive and discharge summaries were not prepared.

Thus, the observed differences in program operations between the two groups appear to be the direct result of the requirements of the demonstration.

One final point is worth noting. The comparison facilities were being influenced by many of the same exogenous factors as the demonstration facilities, such as the advent of the ADM Services Block Group, the block granting of social services, and other cost containment measures. Responses to such influences by comparison facilities were manifested similar to those of demonstration facilities, e.g., ensuring that new staff were licensable individuals (QMHPs). Thus, there did not appear to be extraneous factors driving the demonstration results, other than the demonstration.

5. SUMMARY OF THE NATIONAL SURVEY

To help address the issue of nonrepresentativeness of the facilities in the demonstration and to facilitate the generalization of the demonstration to the universe of facilities from which demonstration sites were selected, a national

survey of the universe of ambulatory mental health treatment facilities was conducted. The survey universe comprised 769 community mental health centers and 1,284 other ambulatory mental health treatment facilities. Sixty-three percent of the universe of facilities responded to the survey; 61 percent of the community mental health centers, and 64 percent of the other ambulatory mental health treatment facilities.

Based upon the analysis of results of the survey and after adjusting for inappropriate or incomplete responses, we found that:

- Seventy-eight percent of CMHCs, 50 percent of AMHC, and 60 percent of PHPS met critical requirements of the demonstration--psychiatric supervision, qualified mental health professionals (QMHPs), covered services, quality assurance plan, and clinical record keeping--at the time of the survey.

- Of the facilities responding to the survey and meeting all critical MMHD requirements, 75 percent reported that they were currently billing Medicare for services rendered Medicare Part B beneficiaries. Of these facilities, 78 percent reported that they billed using their own Medicare number.

- Of the facilities meeting all critical MMHD requirements, during 1980 they served between 73,405 Medicare beneficiaries under appropriate, demonstration-like conditions, i.e., by a QMHP or when a QMHP was present in the facility. The median number of beneficiaries served per such facility was: 109 in CMHCs, 30 in AMHCs, and 2 in PHPs.

- For these beneficiaries, the facilities made 791,527 outpatient encounters with them during 1980 and provided 374,413 days of partial hospital hospitalization to them during 1980. The median number of encounters per facility was 696 and the median number of days of partial hospitalization was 116.

These findings represent a basic picture of the universe of ambulatory mental health treatment facilities relative to their ability to participate in Medicare under demonstration conditions and to the extent (beneficiaries and encounters with beneficiaries) to which they might participate in Medicare under demonstration conditions for some base year. The findings may be used in the future to project the results of the demonstration to the universe of facilities.

To examine whether the sample of demonstration facilities was similar or dissimilar to the universe of such facilities, it was decided that the following criterion measure would be used for testing purposes:

$$\frac{\text{Total Medicare beneficiaries served in ambulatory treatment environments}}{\text{Total facility ambulatory client caseload}}$$

This criterion measure was selected because it relates directly to how demonstration facilities were selected. That is, it was expected that demonstration facilities would serve a greater proportion of Medicare beneficiaries than a like measure for the universe of facilities. For the demonstration facilities, these data were reported on the Quarterly Statistical Report, and the quarter immediately prior to the start of the demonstration was used for this analysis. The survey provided the data for the universe of facilities. Athough the demonstration facility data were for 3 months and the universe data for 12 months, there is no reason to believe that the differences in length of time would alter the proportions appreciably.

Examining the distributions of the criterion measure for both groups, it was clear that the data were not normally distributed. To facilitate analysis, the data were grouped as follows:

- High--Proportions 0.51 and above
- Medium--Proportions between 0.021 and 0.50
- Low--Proportions 0.20 and below

A Mann-Whitney U Test was used to test for differences in proportions between the demonstration and survey facilities. There was a Z-score of -3.8018, which is highly significant (p less than .001). This meant that the demonstration facilities were dissimilar from the universe of facilities from which demonstration sites were selected. Accordingly, demonstration results should not be considered directly generalizable to the universe of ambulatory mental health treatment facilities, without first adjusting statistically for the dissimilarities.

6. ANALYSIS OF FINANCIAL OFF-SETS TO MEDICARE

It is clear that the demonstration reached a new, previously untreated Medicare population. For these individuals, there could not have been compensatory savings to the Medicare program for the provision of mental health services to this population, or shifts away from traditional providers of mental health care. This was also reflected in the MEDPAR analysis which showed no discernible impacts of the demonstration on the use of Medicare Part A benefits for inpatient treatment of a psychiatric disorder. Yet, the MEDPAR analysis did show markedly lower use of Medicare inpatient mental health benefits in the demonstration areas in both the pre-waiver and post-waiver periods. This finding is consistent with NIMH research showing reduced use of inpatient in geographic areas served by organized ambulatory mental health treatment settings, with the availability of partial hospitalization being the key explanatory variable. It should be noted, however, that MEDPAR may not be an appropriate, definitive dataset to test the offset question because of its unknown representativeness, and the fact that it only deals with inpatient care. There has been considerable research suggesting that provision of mental health services results in a reduction in use of other health services. Subsequent analysis on both Part A and Part B claims data will examine the offset question more fully relative to total health services utilization, the results of which will be issued as an addendum to this report.

7. CONCLUSIONS

In terms of its original, stated purposes, the Demonstration was a success--accessibility to mental health care provided in organized settings by Medicare beneficiaries was increased. Accessibility was achieved through a substantial investment by Medicare, particularly for partial hospitalization. However, these overall costs are not out of line with similar benefit packages offered by other payers. There is no evidence that either beneficiaries or providers attempted to take undue advantage of, or abuse, the Demonstration conditions.

In considering the Demonstration results, it is recommended that the Department focus attention on four key areas:

- Provider Status--The national survey component of the evaluation of the Demonstration showed that 35 percent of the respondents to the survey were billing Medicare, at the time of the survey, using their own facility Medicare provider number. Many who were not reported difficulty in obtaining a provider number from the cognizant Medicare contractor, reflecting some difficulty in obtaining necessary approvals for the facility as a physician-directed clinic. In some parts of the country, it appeared easier to obtain such approvals than in other parts of the country. Additional work is needed to determine the nature of the problems being encountered. If, in fact, the problems are solely related to carrier implementation differences, this can be addressed with no change in policy or benefits.

- Adequacy of the Current Benefit--It is noteworthy that the majority of beneficiaries in the Demonstration would have been unaffected by the current benefit restriction--their charges were less than the current limitation. However, the younger, disabled beneficiaries incurred substantially higher charges, as did 47 percent of the elderly beneficiaries. It is recommended that consideration be given to raising the current limit and changing the current co-payment level to assure accessibility for these populations.

- Application Of The Limitation--Current Medicare policy is that the annual reimbursement limit applies to physician services and to services incident to those of a physician, when the physician limit is reached. However, we found substantial variation in how Medicare carriers were treating the limit--some apply it as specified in the policy, some apply it to all services including "incident to" services, and some pay for "incident to" services on an unlimited basis whether or not the limit on physician services is attained. The Department can assure that the current policy is implemented uniformly throughout the country, without a change in policy or benefits.

- Coverage Of Partial Hospitalization--The partial hospitalization benefit proved to be expensive, when covered on an unlimited basis. Consequently, if consideration of partial hospitalization is undertaken, then use of limits (either dollars or days) will be an essential feature to control costs.